

AMENDED CLAIM SET:

1. (Previously presented) A liquid crystal display usable with a back light source supplying light, comprising:

a cholesteric liquid crystal (CLC) polarizer to transmit one of left-circularly polarized light and right-circularly polarized light from the back light source, and to reflect other light not transmitted;

a lower substrate on which a CLC color filter layer is formed wherein the CLC color filter layer transmits the circularly polarized light from the CLC polarizer having certain wavelengths and reflects other light not transmitted;

a liquid crystal layer to selectively revolve a polarized direction of the circularly polarized light from the CLC color filter layer;

an upper substrate over the liquid crystal layer and having a hologram diffuser wherein the hologram diffuser diffuses the revolved circularly polarized light from the liquid crystal layer; and

a linear polarizing transformer to transform the diffused circularly polarized light from the hologram diffuser into linearly polarized light,

wherein the hologram diffuser is positioned below the upper substrate.

2. (Original) The liquid crystal display according to claim 1, wherein the linear polarizing transformer includes

a $\lambda/4$ film to transform the circularly polarized light into linearly-polarized light,

a compensating film over the $\lambda/4$ film, and

a linear polarizer over the compensating film.

3. (Currently amended) A liquid crystal display usable with a back light source supplying light, comprising:

a cholesteric liquid crystal (CLC) polarizer to transmit one of left-circularly polarized light and right-circularly polarized light from the back light source, and to reflect other light not transmitted;

a lower substrate on which a CLC color filter layer is formed wherein the CLC color filter layer transmits the circularly polarized light from the CLC polarizer having certain wavelengths and reflects other light not transmitted;

a $\lambda/4$ film above the lower substrate to transform the circularly polarized light from the CLC color filter layer into linearly-polarized light;

a first linear polarizer above the $\lambda/4$ film;

a liquid crystal layer above the first linear polarizer and to selectively transmit the linearly-polarized light; and

an upper substrate over the liquid crystal layer and having a hologram diffuser, wherein the hologram diffuser diffuses the linearly-polarized light from the liquid crystal layer.

4. (Original) The liquid crystal display according to claim 3, wherein the $\lambda/4$ film is coated with a liquid crystal layer which has been hardened by light irradiation.

5. (Original) The liquid crystal display according to claim 3, wherein the first linear polarizer includes a direct coating polarizer.

6. (Original) The liquid crystal display according to claim 3, further comprising:

a second linear polarizer to transform the diffused linearly polarized light from the hologram diffuser into linearly polarized light.

7. (Previously presented) A liquid crystal display usable with a back light source supplying light, comprising:

a cholesteric liquid crystal (CLC) polarizer to transmit one of left-circularly polarized light and right-circularly polarized light from the back light source, and to reflect other light not transmitted;

a $\lambda/4$ film to transform the circularly polarized light from the CLC polarizer into linearly-polarized light;

a linear polarizer above the $\lambda/4$ film;

a lower substrate above the linear polarizer;

a liquid crystal layer above the lower substrate;

a hologram diffuser over the liquid crystal layer; and

an upper substrate over the hologram diffuser, wherein the hologram diffuser diffuses the linearly-polarized light from the liquid crystal layer.

8. (Previously presented) A liquid crystal display usable with a back light source supplying light, comprising:

a collimating member to collimate the light supplied by the back light source;

a cholesteric liquid crystal (CLC) polarizer to transmit one of left-circularly polarized light and right-circularly polarized light

from the collimating member, and to reflect other light not transmitted;

a lower substrate on which a CLC color filter layer is disposed wherein the CLC color filter layer transmits light from the CLC polarizer having certain wavelengths and reflects other light not transmitted;

a liquid crystal layer;

a hologram diffuser over the liquid crystal layer;

a planarization layer to planarize the hologram diffuser;

an upper substrate over the hologram diffuser, wherein the hologram diffuser diffuses light from the liquid crystal layer; and

a linear polarizing transformer polarizing the diffused light into linearly-polarized light.

9. (Original) The liquid crystal display according to claim 8, wherein the CLC color filter layer includes dichromic acid photoinitiator.

10. (Currently amended) A liquid crystal display, comprising:

a back light unit to produce and supply light;

a collimating member to collimate the light supplied by the back light unit;

a cholesteric liquid crystal (CLC) polarizer to transmit circularly polarized light of a predetermined direction from the collimating member, and to reflect other light not circularly polarized in the predetermined direction;

a lower substrate above the CLC polarizer;

an upper substrate above the lower substrate;

a holographic diffuser disposed below the upper substrate and above the lower substrate, wherein the hologram diffuser diffuses light without altering a polarization of the light;

a liquid crystal layer disposed between the lower substrate and the upper substrate;

a color filter layer to transmit only predetermined wavelengths of light disposed between the lower substrate and the upper substrate; and

an upper linear polarizer above the upper substrate and polarizing the diffused light from the holographic diffuser.

11. (Original) The liquid crystal display according to claim **10**, wherein the color filter layer includes

a CLC color filter layer to transmit the circularly polarized light of the predetermined direction from the CLC polarizer, and to

reflect other light not circularly polarized in the predetermined direction.

12. *(Original)* The liquid crystal display according to claim **10**, wherein the color filter layer includes an absorbing type color filter layer.

13. *(Original)* The liquid crystal display according to claim **10**, further comprising:

a $\lambda/4$ film disposed below the upper linear polarizer to transform the circularly polarized light of the predetermined direction into linearly-polarized light.

14. *(Original)* The liquid crystal display according to claim **10**, wherein the back light unit includes:

a reflecting plate to recycle the other light initially reflected by the CLC polarizer up toward the CLC polarizer.

15. *(Previously presented)* The liquid crystal display according to claim **13**, further comprising:

a compensating film disposed between the $\lambda/4$ film and the upper linear polarizer to transform light into linearly-polarized light.

16. *Cancelled.*

17. (*Previously presented*) The liquid crystal display according to claim 1, further comprising:

a planarization layer disposed on the hologram diffuser to planarize the hologram diffuser.

18. (*Previously presented*) The liquid crystal display according to claim 1, further comprising:

a collimating member disposed below the lower substrate to collimate the light supplied by the back light source and direct it toward the CLC polarizer.

19. (*Previously presented*) The liquid crystal display according to claim 3, further comprising:

a planarization layer disposed on the hologram diffuser to planarize the hologram diffuser.

20. (*Previously presented*) The liquid crystal display according to claim 3, further comprising:

a collimating member disposed below the lower substrate to collimate the light supplied by the back light source and direct it toward the CLC polarizer.

21. (*Previously presented*) The liquid crystal display according to claim 7, further comprising:

a planarization layer disposed on the hologram diffuser to planarize the hologram diffuser; and

an absorbing type color filter layer disposed above the liquid crystal layer.

22. (*Previously presented*) The liquid crystal display according to claim **7**, further comprising:

a collimating member disposed below the lower substrate to collimate the light supplied by the back light source and direct it toward the CLC polarizer.

23. (*Previously presented*) The liquid crystal display according to claim **8**, wherein the linear polarizing transformer includes:

a $\lambda/4$ film; and

a linear polarizer over the $\lambda/4$ film.

24. (*New*) The liquid crystal display according to claim **3**, wherein the hologram diffuser is positioned below the upper substrate.

25. (*New*) The liquid crystal display according to claim **24**, wherein the hologram diffuser is positioned directly below the upper substrate.

26. (New) The liquid crystal display according to claim **21**, wherein the color filter is disposed directly above the liquid crystal layer.

27. (New) The liquid crystal display according to claim **12**, wherein the color filter layer is disposed directly above the liquid crystal layer.